

UNITED STATES DEPARTMENT OF AGRICULTURE  
NATURAL RESOURCES CONSERVATION SERVICE

NOTICE OF THE SOURCE IDENTIFIED CLASS RELEASE OF RILEY GERmplasm  
SHOW PARTRIDGE PEA

The Natural Resources Conservation Service, United States Department of Agriculture announces the naming and source identified class release of Riley Germplasm showy partridge pea, [*Chamaecrista fasciculata* (Michx.) Greene].

Riley Germplasm showy partridge pea has been assigned the NRCS accession number PMK-2274 and the Plant Introduction (PI) number 421285. Riley Germplasm showy partridge pea has been developed to provide an adapted source for use in wildlife habitat improvement, erosion control, and recreational area plantings in the Central Plains Region.

**Origin:** Riley Germplasm showy partridge pea originated from seed collected in 1977 by Manhattan Plant Materials Center personnel along Riley County (RC) Road 901 in Riley County, Kansas. The collection site was located in Ashland Bottoms, NW1/4 Sec.15, T.11S., R7E.

**Method of Selection:** Riley Germplasm showy partridge pea was compared to 'Comanche' showy partridge pea at the Manhattan Plant Materials Center and at off center evaluation sites in Kansas and Nebraska. Comparison evaluations were based on seed production and reseeding potential.

**Ecotype Description:** Riley Germplasm showy partridge pea is an annual, native warm-season legume. Plants are from 1 to 3 feet tall and stems are erect and branching. The leaves have a distinct gland midway along the stalk and are compound. Each leaf has 12-36 linear leaflet pairs. The flowers are borne in clusters of 1-6 in the leaf axis. The flowers have yellow petals and 10 unequal stamens. The fruit is a flat linear pod up to 4 inches long that burst open when mature to disperse flat, dark brown seeds. There are approximately 57,000 seeds per pound.

**Site Description:** The collection site is within Major Land Resource Area (MLRA) 76, Bluestem Hills. Soils at the collection site are a Reading silt loam. The Reading Series consist of deep, nearly level and gently sloping soils on stream terraces and foot slopes in creek valleys. These soils formed from alluvial sediments. The slope ranges from 0 to 1 percent. Elevation averages 1070 feet. The average daily maximum temperature is 66 F., the average daily minimum temperature is 42 F. The average frost free period is 179 days from 4/18 to 10/14. Average annual precipitation is 33 inches. The USDA Plant Hardiness Zone is 5b.

**Anticipated Conservation Uses:** The potential uses for Riley Germplasm showy partridge pea includes wildlife habitat improvement, critical area treatment for erosion control, and for roadsides, parks, and recreation area beautification. Seeds of the plant are considered to be an important food for quail, pheasants, mallards, songbirds and field rodents. The foliage of showy partridge pea is not readily eaten by livestock. The

plants, if consumed in large quantities by domestic stock, may cause stress and infrequently death due to a cathartic substance present in the leaves and seed. Deer browse it readily without ill effect.

**Potential Area of Adaptation:** This species has a wide geographic area of distribution ranging from Maine to Florida west to southeast South Dakota, southwest to southeast Colorado and south through central Texas. It is found most commonly in rocky or sandy soils in prairies or open woods, along roadsides, and other disturbed sites. It cannot compete in established prairie grasslands, but frequently colonizes disturbed prairie sites and edges. Riley Germplasm would have application for plantings in Oklahoma, Kansas, and eastern two thirds of Nebraska.

**Management:** Establishment is from seed. A clean, firm, weed free seedbed is necessary for optimum establishment. The recommended seeding rate is 10 pounds pure live seed (PLS) per acre for a pure stand. Usually 2 pounds PLS per acre is recommended for seeding in a mixture. Seeds should be planted at a depth of 1/4 to 1/2 inch. Seed should be inoculated with EL (cowpea type) inoculant prior to planting. This species must be seeded every year for maximum stand density. However, it is a good reseeding annual and a stand may be maintained with proper management for several years. Without proper management, the planted stands will gradually disappear after 1 to 3 years as competing species dominate. Light disking in late winter encourages natural reseeding as does early spring burns. Partridge pea will grow on low fertility soils, but will respond to fertilizer application.

**Release Justification:** Riley Germplasm showy partridge pea was selected for use in the Central Plains Region. It was compared to 'Comanche' showy partridge pea, a release from Knox City, Texas. While both performed equally as far as initial germination, the Riley Germplasm showed greater reseeding potential, while the 'Comanche' reseeding potential was limited by the shorter growing season in Kansas and Nebraska.

**Source Material Maintenance:** Generation 1 seed, equivalent to foundation seed, is available from the Mahattan Plant Material Center, Manhattan, Kansas.

Approval:



State Conservationist

United States Department of Agriculture  
Natural Resources Conservation Service  
Salina, Kansas

ACTING FOR

4-2-99

Date

**Attachment No 1. Source Identified Class Release Notice of Riley Germplasm Showy Partridge Pea Environmental Impact Assessment Statement.**

Riley Germplasm showy partridge pea *is* native to the Central and Southern Great Plains Region. It is an annual species and will volunteer on distributed sites and along prairie edges. It ~~is~~ considered a pioneer- type species that conditions the site for further developed by higher seral and climax type species. It cannot compete in established prairie sites and will not replace associated climax dominants. Because of its poor competitiveness, it is not found within pristine or climax plant communities. Reviewing the Guidelines for Assessing Environmental Conditions for Plant Releases, Exhibit 540-22, revised National Plant Materials Manual, it was determined that this species has no invasive qualities which would warrant further evaluation for potential invasiveness or preclude it's release entirely.